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EXAMINER

LE, U

ART UNIT PAPER NUMBER

2771 16

DATE MAILED: 06/12/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/004,827

Applicant(s)

PAGE, LAWRENCE

Examiner

Uyen T Le

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2771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☐ Responsive to communication(s) filed on 27 April 2000 and 01 May 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-7, 9-15, 18-33, 36 and 37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-7 and 9-15 is/are allowed.
- 6) ☐ Claim(s) 18-33, 36 and 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☒ The proposed drawing correction filed on 01 May 2000 is: a) ☒ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____.

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DETAILED ACTION

1. Applicant's amendment to claims 18, 25-29, 31, 33, 36 and cancellation of claims 8, 16, 17, 34, 35 are acknowledged. However, due to prior art newly found, the finality of the Office Action mailed 9 March 2000 is withdrawn.

2. Applicant's amendment to the drawings is acknowledged. Consequently, objection to the drawings is withdrawn.

Claim Objections

3. Claims 1 and 9 are objected to because of the following informalities: in claims 1 and 9, the sentence of part (b) is incomplete. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 18, 19, 26, 36 are rejected under 35 U.S.C. 102(a) as being anticipated by applicant's admitted prior art (AAPA) at pages 3 and 12.

Claims 18, 19 merely read on the fact that a rank of a document is assigned based on the degree to which the search terms match the anchor descriptions in its backlink documents (see page 3, lines 13-18). Clearly, the backlink documents and the ranked documents are

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linked and the documents are processed according to their ranks. The claimed “wherein each of the ranks of the one or more of the plurality of linked documents are adjusted by a weight” merely reads on the fact that a rank inherently includes an adjusted weight since a document is ranked depending on how many backlink documents it has.

Claim 26 merely reads on the fact that the prior art assigns a rank to a document based on the degree to which the search terms match the anchor descriptions in its backlink documents (see page 3, lines 13-18). Clearly, the backlink documents and the ranked documents are linked and the documents are processed according to their ranks. The claimed “wherein the processing includes crawling the plurality of linked documents” merely reads on the fact that the user follows the links in the method of the prior art.

Regarding claim 36, the claimed “wherein performing a random traversal includes selecting a random link to traverse in a current linked document” merely reads on the well known fact admitted by the applicant at page 12, line 19 that users typically jump to a different place while surfing the web. Furthermore, the claimed steps of assigning a rank to the linked document dependent on the number of times the linked document has been traversed is met when the prior art citation counting method assigns a rank to a document according to the number of documents pointing to it (see page 3, lines 20-22). Clearly, the step of processing linked documents according to their rank had been performed in the prior art method since the whole purpose of ranking documents is for orderly processing them according to their rank.

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5. Claim 28 is rejected under 35 U.S.C. 102(e) as being anticipated by Barrett et al (US 5,727,129).

Regarding claim 28, Barrett discloses a computer implemented method of ranking a plurality of linked documents including obtaining a plurality of linked documents, generating an initial estimate of the rank of each of one or more plurality of linked documents and updating the estimate (see the abstract, Figures 4-8). Clearly, each linked document is assigned a rank that is dependent on ranks of the one or more of the plurality of linked document and documents are processed according to their rank.

6. Claims 25, 27, 29-33 are rejected under 35 U.S.C. 102(e) as being anticipated by Oren et al (US 5,630,117).

Claim 25 merely read on the fact that a document is assigned a rank based on the degree to which the search terms match the anchor descriptions in its backlink documents (see Figures 3, 4). Clearly, the linked documents are processed according to their ranks. The claimed "wherein the processing includes displaying links to the plurality of linked documents as results from a search" is met when Oren shows results of a search for example of a database consisting of documents relating to the Civil War (see column 9, lines 41-47, Figures 5a-f).

Regarding claim 27, clearly the links are displayed as a directory (see Figure 5a).

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Claim 29 differs from claim 25 by displaying links to the linked documents and annotations representing the relative importance or rank or of each linked document. This feature merely reads on Figure 5b of Oren showing additional information of the importance of a document once the user picks the personality of a slave.

Regarding claim 30, Oren discloses that the annotation is text (see Figure 5b).

Claim 31 merely differs from claim 25 by processing documents according to textual matching. Oren clearly shows that textual matching is well known in the art in processing documents (see column 1, lines 62-66).

Claim 32 merely reads on the fact that textual matching inherently includes anchor text associated with the links.

Regarding claim 33, clearly, the linked documents are processed according to their grouping (see Figure 5b).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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7. Claims 20, 21, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (AAPA) at page 12.

Claim 20 merely reads on the well known fact admitted by the applicant at page 12, line 19 that users typically jump to a different place while surfing the web. Therefore, it would have been obvious to one of ordinary skill in the art to include making the weight dependent on an estimation of a probability that a linked document will be accessed in the method of the prior art since it is typical for users to jump from unimportant sites while surfing.

Claim 21 merely reads on the fact that recent documents have more up-to-date information than documents of an earlier date. Therefore, it would have been obvious to one of ordinary skill in the art to include making the weight dependent on the last update time of the one or more plurality of linked documents in the method of the prior art in order to rank documents based on their updated information.

Claim 23 merely reads on the fact that graphic effects such as large fonts catch viewer's attention more than small fonts. Therefore, it would have been obvious to one of ordinary skill in the art to include making the weight dependent on the visibility of the links in the method of the prior art in order to rank documents according on how visually attractive they are to viewers.

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8. Claims 22, 24, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (AAPA), in view of Barrett et al (US 5,727,129).

Regarding claim 22, although AAPA does not specify that the weight is dependent on whether the documents are selected documents or root, this feature merely reads on the fact that the method of Barrett gives more weight to sites accessed repeatedly recently (see column 7, line 57- column 8, line 2).

Regarding claim 24, although AAPA does not specify that the weight is dependent on a particular user's preferences, the rate at which users access the linked documents or the importance of the documents, it is well known in the art as shown by Barret that a user has a pattern of accessing web pages and that the statistics can be used to identify which links the user is likely to access (see the abstract). Therefore, it would have been obvious to one of ordinary skill in the art to include making the weight dependent on a particular user's preferences, the rate at which users access the linked documents or the importance of the documents in the method of the prior art in order to prefetch links of interest to a specific user based on his history of accessing the network.

Regarding claim 37, although AAPA does not specify that there is a predetermined probability that the next linked document to be traversed will be a random one of the plurality of linked documents, this feature merely reads on the method of Barrett predicting which of several displayed hyperlinks are likely to be accessed by a user in performing a search (see column 3, lines 61-63). Clearly, in the process of predicting, a

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predetermined probability that the next linked document to be traversed will be a random one has to be present. Therefore, it would have been obvious to one of ordinary skill in the art to include a predetermined probability that the next linked document to be traversed will be a random one in the method of AAPA in order to predict users' needs and provide a fast response.

Allowable Subject Matter

9. Claims 1-7, 9-15 are allowed.

The following is an examiner's statement of reasons for allowance: the prior art of record does not disclose or make obvious a computerized method for ranking documents represented as nodes including determining the rank of a node from a mathematical algorithm involving an initial N-dimensional vector wherein each component represents a probability that a user will arrive at a given node after a number of forward links and a NxN transition probability matrix wherein each element ij of the matrix represents a probability of moving from node i to node j ; or otherwise suggest its use together with all the limitations recited in claims 1 and 9.

All dependent claims 2-7, 10-15 being further limiting and definite are also allowable

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosures.

Wang et al "Prefetching in Worl Wide Web", IEEE 1996, pages 28-32.

Ramer et al "Similarity, Probability and Database Organisation: Extended Abstract", IEEE 1996, pages 272-277.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Uyen Le whose telephone number is (703) 305-4134. The examiner can be reached on Monday through Thursday from 7:00am to 5:30pm.

If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Thomas Black can be reached on (703)305-9707.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington D.C. 20231

or faxed to: (703)308-9051, (for formal communications intended for entry)

or: (703)308-5403 (for informal or draft communications, please label

PROPOSED or DRAFT)

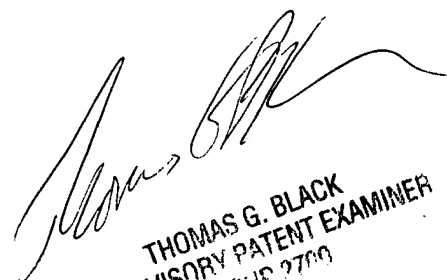
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone is (703)305-3900.

UL

06/06/00



THOMAS G. BLACK
SUPERVISORY PATENT EXAMINER
GROUP 2700